

**REMARKS**

**I. Initial Remarks**

Claims 1, 14, and 37 are amended, and support for the amendments may be found in the Specification at least in paragraph [0038]. No claims are added or cancelled in this paper, and no new matter is added. Claims 11 and 24 were previously cancelled. Thus, claims 1-10, 12-23, and 25-37 are pending. Claims 1, 14, and 37 are in independent form.

In the Office Action, Claims 1-10, 12-23 and 25-37 were rejected on the ground of non-statutory obviousness-type double patenting as allegedly being unpatentable over claims 1-40 of U.S. Pat. No. 6,996,775, claims 1-24 of U.S. Pat. No. 6,943,707 and claims 1-30 of U.S. Pat. No. 6,490,580.

Substantively, claims 1-3, 5-10, 12-16, 18-23, 25-30 and 35-37 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over the combination of Applicants' Background, U.S. Pat. No. 6,504,990 to Abecassis ("Abecassis"), U.S. Pat. No. 5,873,076 to Barr et al. ("Barr"), and U.S. Pat. No. 5,963,940 to Liddy et al. ("Liddy"). Claims 4 and 17 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over the combination of Applicants' Background, Abecassis, Barr, Liddy, and U.S. Pat. No. 6,243,676 to Witteman ("Witteman"). Claims 27 and 31 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over the combination of Applicants' Background, Abecassis, Barr, Liddy, and U.S. Pat. No. 5,835,087 to Herz et al. ("Herz"). Claims 28 and 32 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over the combination of Applicants' Background, Abecassis, Barr, Liddy, and U.S. Pat. No. 6,807,231 to Wiegand et al. ("Wiegand"). Claims 29-30 and 33-34 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over the combination of Applicants' Background, Abecassis, Barr, Liddy, and U.S. Pat. No. 5,525,808 to Irie et al. ("Irie"). Applicants respectfully traverse the rejections.

In view of the following arguments, all claims are believed to be in condition for allowance over the references of record. Therefore, this response is believed to be a complete response to the Office Action.<sup>1</sup> Further, for any instances in which the Examiner took Official Notice in the Office Action, Applicants expressly do not acquiesce to the taking of Official Notice, and respectfully request that the Examiner provide an affidavit to support the Official Notice taken in the next Office Action, as required by 37 CFR 1.104(d)(2) and MPEP § 2144.03.

## II. Double Patenting

The Examiner rejected claims 1-10, 12-23 and 25-37 under the judicially-created doctrine of “obviousness-type” double patenting with respect to claims 1-40 of U.S. Pat. No. 6,996,775 (“‘775 patent”), claims 1-24 of U.S. Pat. No. 6,943,707 (“‘707 patent”) and claims 1-30 of U.S. Pat. No. 6,490,580 (“‘580 patent”). However, Applicants do not acquiesce to this basis of rejection.

For example, no claim of the ‘775 patent, ‘707 patent or ‘580 patent recites “(a) in response to a signal of interest at a particular time during the temporal document, identifying a temporal range of the temporal document for which related documents are to be found.” (Emphasis added.) In contrast, claim 1 of each of the ‘580 patent and the ‘707 patent recites in part “(a) in response to a signal of interest at a particular time during the temporal document, identifying a portion of the temporal document for which related documents are to be found,” while the ‘775 patent recites “(a) in response to receiving a signal of interest at a particular time during the temporal document, identifying a portion of the temporal document for which related documents are to be found.” (Emphasis added.) Additionally, weighing terms “according to a temporal position of the term within the temporal range” or “according to an amount of time in which the term precedes the particular time” is not an obvious variation of the subject matter claimed in the ‘775 patent, ‘707

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<sup>1</sup> As Applicants’ remarks with respect to the Examiner’s rejections are sufficient to overcome these rejections, Applicants’ silence as to assertions by the Examiner in the Office Action or certain requirements that may be applicable to such rejections (e.g., whether a reference constitutes prior art, motivation to combine references, assertions as to dependent claims, etc.) is not a concession by Applicants that such assertions are accurate or such requirements have been met, and Applicants reserve the right to analyze and dispute such assertions/requirements in the future.

patent or ‘580 patent. Further, “the signal of interest indicating interest in a sequence of material” is neither claimed by or an obvious variation of the subject matter claims in the ‘775 patent, ‘707 patent or ‘580 patent.

Thus, the Examiner’s double patenting rejection of claims 1-10, 12-23 and 25-37 should be withdrawn for at least these reasons.

### **III. Section 103 Claim Rejections**

#### **A. Independent Claim 1**

Claim 1 was rejected by the Examiner under section 103(a) as allegedly unpatentable over the applied combination of Applicants’ Background, Abecassis, Barr, and Liddy. However, the cited references fail to teach or suggest at least “identifying a temporal range” and “the term score of a term is weighted according to a temporal position of the term within the temporal range” in the context of the entire claim.

##### **1. “identifying a temporal range”**

Claim 1 recites in part “in response to a signal of interest at a particular time during the temporal document, identifying a temporal range of the temporal document for which related documents are to be found, the signal of interest indicating interest in a sequence of material presented over the temporal range.” The Examiner rejected claim 1 and stated that:

Applicant(s) admitted that prior art discloses a method for finding documents which relate to a portion of a temporal document, comprising:

(a) in response to a signal of interest at a particular time during the temporal document, identifying a segment of the temporal document for which related document arc to be found (Applicant’s Specification, page 3, paragraph [0011]: a user indicates interest during a particular segment (particular time) of the video material (temporal document); upon an expression of interest, the related web

page or document of the particular segment may be presented to the user)

(Office Action, page 4; Emphasis added.) The Examiner further stated that:

Applicant admitted that the prior art discloses a user indicates interest at a particular segment of the video material by clicking with a mouse or pressing a button as shown in the Specification, page 3, paragraph [0011]. One . . . would have acknowledged that the indicated video segment would include a time interval which is a beginning time and an end time of the indicated video segment. In addition, Examiner has introduced Abecassis reference, which teaches a user defines a video segment for playing, wherein the defining may [be] either directly by identifying a beginning and an ending point (time), or indirectly by identifying at least one of a plurality of video segments ([Abecassis] Abstract;).

(Office Action, page 5.) However, claim 1 recites “a temporal range of the temporal document,” not “a portion of a temporal document” or “a segment of the temporal document” as stated by the Examiner. Additionally, Applicants do not concede to have made the alleged admissions that the Examiner suggests were made here and elsewhere in the Office Action. In any event, none of Applicants’ Background, Abecassis, Barr, or Liddy teach or suggest “in response to a signal of interest at a particular time during the temporal document, identifying a temporal range of the temporal document for which related documents are to be found, the signal of interest indicating interest in a sequence of material presented over the temporal range” as recited by independent claim 1.

Nowhere does Applicant’s Background disclose “in response to a signal of interest at a particular time during the temporal document, identifying a temporal range of the temporal document for which related documents are to be found, the signal of interest indicating interest in a sequence of material presented over the temporal range.” (Emphasis added.) The Background discloses “Web documents, such as pages or sites, to be associated with particular portions of the video content,” where “when a particular portion of the video programming is reached, the related Web page or document may automatically be presented to the user.” (Applicants’ Specification, paragraph [0011].) Thus, in paragraph 11 of the Specification, Applicants merely discuss an

example of a system that associates a web page with a “particular portion” of a video, wherein the “particular portion” of video material is identified by a “prior manual choice of other Web documents,” not identified by any indicated interest.

Additionally, as noted by the Examiner, the Background further states that “[alternatively], no information about related material may be presented until or unless a user indicates interest during a particular segment of the video material (as by ‘clicking’ with a mouse, or pressing a button); upon an expression of interest, the particular other Web page previously chosen as related to this portion of the video material may be presented to the user.” (*Id.*) However, this portion of the Background additionally fails to support the Examiner’s assertion. In contrast, the Background discloses solely that “a user indicated interest during a particular segment of the video material,” not that the “expression of interest” is in regard to more than what is currently presented to the user. Nowhere does Applicants’ Background disclose that the “expression of interest” in any way is “indicating interest in a sequence of material presented over the temporal range.” (Emphasis added.) Thus, Applicants’ Background fails to render obvious “a signal of interest at a particular time during the temporal document . . . the signal of interest indicating interest in a sequence of material presented over the temporal range” as recited by independent claim 1.

Moreover, the Examiner additionally cited the Abecassis reference as allegedly disclosing the recitation. However, Abecassis fails to teach or suggest “identifying a temporal range of the temporal document for which related documents are to be found, the signal of interest indicating interest in a sequence of material presented over the temporal range.” This is no surprise, at least because in contrast to search, Abecassis is directed towards the unrelated field of randomly and continuously playing fragments of a video segment. (E.g., Abecassis, Title.)

Abecassis discloses:

A method of, and a system capable of, playing at least a portion of at least one video segment of a video, the method comprising the steps of, and the system comprising processing, random accessing, and buffering means for, enabling a user to define for a fragmented playing, at least one video segment within a video;

Amendment in Response to Non-Final

Office Action dated February 25, 2009

Reply to Office Action of November 26, 2008

fragmenting the at least one video segment responsive to a significant change in the comparative content of frames within the at least one video segment, responsive to a preestablished preference for a minimum duration of a fragment; and/or responsive to a plurality of camera angles included within the at least one video segment; and randomly and continuously playing, responsive to the fragmenting, at least a plurality fragments of the at least one video segment for a period of time longer than a linear playing time of the at least one video segment of the video; and wherein the defining may be either directly by identifying a beginning and an ending point, or indirectly by identifying at least one of a plurality of previously defined video segments of the video; wherein said randomly and continuously playing utilizes overlapping fragments; wherein at least one audio element of a plurality of audio elements is linearly played during a randomly and continuously playing of at least a plurality fragments; and/or wherein, responsive to a preestablished content preference, the randomly and continuously playing skips a playing of at least a portion of the at least one video segment.

(Abecassis, Abstract; Emphasis added.) The Examiner appears to be focused on the emphasized language as allegedly disclosing the recitation of claim 1. However, claim 1 does not merely recite a “range” or “identifying a beginning and an ending point;” instead claim 1 specifically recites “in response to a signal of interest at a particular time during the temporal document, identifying a temporal range of the temporal document for which related documents are to be found.” (Emphasis added.) At most, Abecassis discloses directly identifying a beginning and ending point, or indirectly identifying previously defined video segments. No identification disclosed by Abecassis is in any way “in response to a signal of interest.” Thus, Abecassis cannot teach or suggest “in response to a signal of interest at a particular time during the temporal document, identifying a temporal range of the temporal document for which related documents are to be found.”

Moreover, Abecassis makes his identification for a completely unrelated purpose, not “identifying a temporal range of the temporal document for which related documents are to be found.” (Emphasis added.)

These deficiencies of Abecassis can further be appreciated since it is directed to the unrelated field of “processing, random accessing, buffering, and playing a video utilizing segment

information” such as “a DVD, a DBS,” or a “video-on-demand transmission.” (Abecassis, col. 1, lines 12-18.) Clearly, Abecassis is not directed towards search, and thus cannot teach or suggest anything with regard to search, let alone “in response to a signal of interest at a particular time during the temporal document, identifying a temporal range of the temporal document for which related documents are to be found.”

Additionally, the Examiner further alleged that it would be obvious to combine Abecassis with Applicants’ Background with the alleged motivation “to include identifying a temporal range of the temporal document in order to create a user-friendly environment for user to play only chosen video segments.” (Office Action, page 5.) Here, the Examiner is pointing to an advantage of claim 1, namely “identifying a temporal range of the temporal document for which related documents are to be found” and then alleging that such an advantage would motivate one to make the proposed combination with Abecassis. However, as the motivation was drawn from Applicants’ application and claims, the Examiner has employed improper hindsight. As stated above, Abecassis is directed to another field (i.e., “randomly and continuously playing of at least a plurality fragments,” of a video such as a DVD), and thus Abecassis is inapplicable and cannot be combined with Barr, Liddy, or Applicants’ Background section. Thus, for at least these reasons, Abecassis cannot teach or suggest the recitation.

The Examiner did not cite Barr and Liddy as allegedly disclosing the recitation. Indeed, Barr and Liddy are unrelated to temporal documents and therefore additionally fail to teach or suggest “identifying a temporal range of the temporal document for which related documents are to be found” and “a signal of interest at a particular time during the temporal document . . . the signal of interest indicating interest in a sequence of material presented over the temporal range”

Accordingly, for at least the reasons discussed above, the Examiner’s rejection of independent claim 1, and all claims depending therefrom, should be withdrawn.

2.       **“the term score of a term is weighted according to a temporal position of the term within the temporal range”**

Claim 1 further recites in part “said scores for each document based on a summation of term scores for at least a subset of the terms of the selected text, the term score of a term is weighted according to a temporal position of the term within the temporal range.” The Examiner admitted that Applicants’ Background, Abecassis, and Barr fail to disclose the recitation. (Office Action, page 7.) The Examiner then cited Applicants’ Specification and stated that

The specification of page 7, paragraph [0027] recites “The related documents may be selected from the collection according to the scores achieved when evaluating documents in collection according to a formula giving scores to documents depending upon the occurrence in the documents of terms which occur in text associated with the portion of the temporal document identified.” Therefore, the limitation “the term score of a term is weighted to a temporal position of the term within the temporal range” is interpreted as “the term score of a term is weighted depending upon the occurrence in the documents of terms which occur in text associated with the portion of the temporal document identified.”

(Office Action, page 7; Emphasis added.) However, Applicants do not acquiesce to the Examiner’s inappropriate interpretation of this recitation of claim 1. As stated in the MPEP, “[during] patent examination, the pending claims must be ‘given their broadest reasonable interpretation consistent with the specification.’” (M.P.E.P. 2111, citing Phillips v. AWH Corp., 415 F.3d 1303, 75 USPQ2d 1321 (Fed. Cir. 2005).) However, in contrast to this express requirement for broad interpretation of claim language, the Examiner here has read into claim 1 a specific example from the Specification of how a “related document may be selected.” (Emphasis added.) Thus, as the Examiner is unduly limiting the claim to an example not recited in the claim, this is not the “broadest reasonable interpretation.”

Further, the Examiner is ignoring claim recitation language that helps to breathe meaning into another recitation. Claim 1 recites in part “said scores for each document based on a summation of term scores for at least a subset of the terms of the selected text, the term score of a term is weighted according to a temporal position of the term within the temporal range.” (Emphasis added.) However, rather than addressing the recitation as it stands, the Examiner appears to be reading the phrase “according to a temporal position of the term within the temporal range”

entirely out of claim 1 by his allegation that claim 1 is limited to examples wherein a term either occurs in a text or does not, without regard for “position of the term within the temporal range,” as positively recited by claim 1. (Emphasis added.) As the Examiner is ignoring the claim recitation “according to a temporal position of the term within the temporal range” in the context of the claim, this interpretation of claim 1 by the Examiner is improper.

Moreover, the Examiner further cited Liddy and stated that

Liddy discloses the scores are an indication of the strength of the association between the term and the document, and for each document the within document Term Frequency (TF) is calculated; the product of TF and the Inverse Document Frequency (IDF) is used as the basis for the postings score - a measure of the relative prominence of a term compared to its occurrence throughout the corpora, and TF.IDF scores are cataloged for a varying number of logical paragraphs in a given document (col. 16, lines 1-23). One . . . would have acknowledged that the term score (term frequency) of a term [is] proportional to an inverted document frequency of the term from the formula TF.IDF, and where TF is the numbers of occurrences of a term within a given document (col. 22, lines 12-25). Liddy further discloses that different sources of evidence are used to compute individual measures of scores between the query and a given document and the individual scores are combined or summed to form a single relevance score (col. 22, line 1 - col. 23, line 50).

It would have been obvious . . . to include said scores for each document based on a summation of term scores for at least a subset of the terms of the selected text, the term score of a term is weighted to a temporal position of the term within the temporal range. Liddy suggests that the product of TF.IDF for a given term in a document provides a quantitative indication of a term’s relative uniqueness and importance for matching purposes.

(Office Action, pages 7-8.) However, Liddy fails to disclose “temporal documents” at all in any context, and thus Liddy says absolutely nothing with respect to “temporal position,” let alone teaching or suggesting wherein “the term score of a term is weighted according to a temporal position of the term within the temporal range” as recited by claim 1. Moreover, Liddy in fact teaches away from “said scores for each document based on a summation of term scores for at least a subset of the terms of the selected text, the term score of a term . . . weighted according to a

temporal position of the term within the temporal range" through Liddy's contrary teaching of a term indexer that scores terms according to term frequency, not according to temporal position. (Emphasis added; See Liddy, col. 16, lines 17-22.) Thus, for at least these reasons, Liddy fails to teach or suggest the recitation of claim 1.

For at least any of the reasons discussed above, the alleged combination of Applicants' Background, Abecassis, Barr, and Liddy fails to teach or suggest at least the aforementioned recitations of independent claim 1. Accordingly, the Examiner's rejection of claim 1, as well as all claims depending therefrom, should be withdrawn.

#### **B. Independent Claim 14**

Independent claim 1 recites in part "in response to a signal of interest at a particular time during the temporal document, identifying a temporal range of the temporal document for which related documents are to be found, the signal of interest indicating interest in a sequence of material presented over the temporal range." Similarly, independent claim 14 recites in part to "identify a temporal range of the temporal document for which related documents are to be found, in response to a signal of interest at a particular time during the temporal document, the signal of interest indicating interest in a sequence of material presented over the temporal range." Although claim 1 recites a method and claim 14 recites a device for finding documents which relate to a portion of a temporal document, and although each claim recited different details, the alleged combination of Abecassis, Barr, Liddy, and Applicants' Background lacks the requisite disclosure.

Additionally, independent claim 1 and independent claim 14 each further recites "said scores for each document based on a summation of term scores for at least a subset of the terms of the selected text, the term score of a term is weighted according to a temporal position of the term within the temporal range." Thus, at least for the reasons discussed above with regard to claim 1, the alleged combination additionally fails to teach or suggest this recitation of claim 14.

Thus, for at least these reasons, the Examiner's rejection of claim 14, as well as all claims depending therefrom, should be withdrawn.

**C. Independent Claim 37**

Each of independent claim 1 and independent claim 37 recites in part "the signal of interest indicating interest in a sequence of material" and "said scores for each document based on a summation of term scores for at least a subset of the terms of the selected text, the term score of a term is weighted according to an amount of time in which the term precedes the particular time." Thus, similar to as discussed above with regard to claim 1, the alleged combination of Abecassis, Barr, Liddy, and Applicants' Background lacks the requisite disclosure. Although claim 1 and claim 37 recite different details, for at least these reasons, the alleged combination fails to teach or suggest the recitation of claim 37. Accordingly, the Examiner's rejection of claim 37 should be withdrawn.

**D. Dependent Claims 2-10, 12-13, 15-23, And 25-36**

Claims 1-10, 12-13, 15-23, and 25-36 are in condition for allowance at least because they are dependent from one of independent claims 1 or 14. Further, the dependent claims also recite independently patentable subject matter, representative examples of which are discussed below.

**1. Claims 27 And 31**

Claims 27 and 31 each recite in part that "the temporal range precedes the particular time of the signal of interest." The Examiner rejected claims 27 and 31 as allegedly obvious over Applicants' Background, Abecassis, Barr, Liddy, and Herz, but admitted that Applicants' Background, Abecassis, Barr, and Liddy fail to disclose the foregoing recitation. (Office Action, page 15.) The Examiner then alleged that "Herz discloses computing weighted sum of selected normative attributes of target object, retrieving summarized weighted relevance feedback data, and then computing topical interest of target object for selected user based on relevance feedback

Amendment in Response to Non-Final

Office Action dated February 25, 2009

Reply to Office Action of November 26, 2008

from all user.” (Office Action, page 15; quoting elements 1203, 1204, and 1205 of Herz, Fig. 12 flow diagram.) The Examiner further alleged that “Herz suggests . . . computing the weighted sum of the identified weighted selected attributes to determine the intrinsic quality measure.” (Office Action, page 16.) However, Herz does not cure the deficiencies of the other cited references. Contrary to the Examiner’s assertion, neither cited summarization of Herz teaches or suggests that “the temporal range precedes the particular time of the signal of interest” as recited by each of claims 27 and 31.

Herz discloses that:

This invention relates to customized electronic identification of desirable objects, such as news articles, in an electronic media environment, and in particular to a system that automatically constructs both a “target profile” for each target object in the electronic media based, for example, on the frequency with which each word appears in an article relative to its overall frequency of use in all articles, as well as a “target profile interest summary” for each user, which target profile interest summary describes the user’s interest level in various types of target objects. The system then evaluates the target profiles against the users’ target profile interest summaries to generate a user-customized rank ordered listing of target objects most likely to be of interest to each user so that the user can select from among these potentially relevant target objects, which were automatically selected by this system from the plethora of target objects that are profiled on the electronic media

(Herz, Abstract; Emphasis added.) Additionally, “[t]he] interest that a given target object X holds for a user U is assumed to be a sum of two quantities:  $q(U, X)$ , the intrinsic ‘quality’ of X plus  $f(U, X)$ , the ‘topical interest’ that users like U have in target objects like X.” (Herz, col. 18, lines 39-42; Fig. 12.) At most, Herz discloses to generate an ordered list of objects most likely to be of interest to each user. Nowhere does Herz in any way teach or suggest a “temporal range,” much less that “the temporal range precedes the particular time of the signal of interest.”

Accordingly, the Section 103 rejections of claims 27 and 31 should be withdrawn for at least these additional reasons.

## 2. Claims 28 And 32

Claims 28 and 32 each recite in part that “each temporal position within the temporal range is weighted equally.” The Examiner rejected claims 28 and 32 as allegedly obvious over Applicants’ Background, Abecassis, Barr, Liddy and Wiegand, but admitted that Applicants’ Background, Abecassis, Barr and Liddy fail to disclose the foregoing recitation. (Office Action, page 16.) However, the addition of Wiegand does not cure the admitted deficiencies of the other cited references. Citing “col. 5, line 58 – col. 6, line 34” of Wiegand, the Examiner alleged that “Wiegand discloses the weighted superposition [of] all segments or blocks of image document are considered equally.” (Office Action, page 16.) However, at most Wiegand discloses an “invention [that] relates to compression and transmission of video signals and, more particularly, to encoding and decoding temporal redundant information present in video signals.” (Wiegand, col. 1, lines 13-15; Emphasis added.) The disclosure of a motion compensated predictor by Wiegand does not teach or suggest the recitations of claims 28 and 32.

In the context of decoding video, Wiegand discloses that “the predictor weights each image segment used in the prediction process and then combines the image segments linearly to obtain the predicted image segment.” (Wiegand, col. 6, lines 12-15.) Additionally, Wiegand discloses that in calculating “the weighted superposition, all [image segments] are considered equally, independent of their spatio-temporal position.” In stark contrast, claims 28 and 31, by way of respective base claims 1 and 14, recite that “the term score of a term is weighted according to a temporal position of the term within the temporal range.” Thus, Wiegand clearly teaches away from the foregoing recitation by explicitly ignoring the spatiotemporal positions.

Moreover, Applicants submit that video compression relating to redundant video information is entirely inapplicable to the present claims, and thus Wiegand cannot be combined with the other references.

Accordingly, the Section 103 rejections of claims 28 and 32 should be withdrawn for at least these additional reasons.

### 3. Claims 29, 30, 33, And 34

Claims 29 and 33 each recite that “the weight of each temporal position within the temporal range increases from a beginning point of the range to a second point of the range, is weighted equally from the second point of the range to a third point of the range, and decreases from the third point of the range to an end point of the range.” Claims 30 and 34 each recite that “each temporal position within the temporal range is weighted according to a discrete two stage exponential function.” The Examiner rejected each of claims 29, 30, 33, and 34 as allegedly obvious over Applicants’ Background, Abecassis, Barr, Liddy and Irie, but admitted that Applicants’ Background, Abecassis, Barr and Liddy fail to disclose the foregoing recitations. (Office Action, pages 16-17.) The Examiner alleged that “Irie discloses in Figure 8 that the weight of each position increases from the beginning point to the second point, is weighted equally to 1 from the second point to a third point, and decreases from the third point to an end point.” (Office Action, page 17.) The Examiner further alleged that “col. 89, lines 9-22” of Irie disclose that “each temporal position within the temporal range is weighted according to a discrete two stage exponential function.” (Office Action, page 16.) However, Irie does not teach or suggest the recitations of claims 29, 30, 33, and 34; additionally, Irie is non-analogous art.

Irie discloses details of an alignment method and apparatus relating to “aligning each of a plurality of processing areas (shot areas, chip patterns) . . . on a substrate.” (Irie, col. 1, lines 16-20.) In Irie, “[an] alignment method (W<sub>1</sub>-EGA method) of this embodiment is based on the conventional EGA method, and is characterized in that when the coordinate position of an i-th shot area ESi on a wafer W is determined, alignment data (coordinate positions) of m (m=9 in FIG. 1) sample shots SA<sub>i</sub> to SA<sub>9</sub> are multiplied with a weighting coefficient W<sub>in</sub> in accordance with distances L<sub>ai</sub> to L<sub>a9</sub> between the area ESi and the nine sample shots SA<sub>i</sub> to SA<sub>9</sub>.” (Irie, col. 2, lines 29-45.) Additionally, Parameter S is “a parameter for changing the degree of weighting.” (Irie, col.2, line 67.)

The Examiner cited Fig. 8 of Irie, but it is unclear from Irie what Fig. 8 is intended to disclose. The only mention of Fig. 8 in all of the Irie specification comes in the brief description of the drawings, wherein Irie states that “FIG. 8 is a view for explaining another method of determining the parameter S.” (Irie, col. 12, lines 26-27.) Perhaps Figure 8 discloses a weight function having a parabolic form or possibly a normal distribution or some other function. (Irie, Fig. 8.) However, an unexplained graph of a weighting parameter relating to wafer alignment in no way teaches or suggests anything at all with regard to the weight of each temporal position as recited in claims 29 and 33. Moreover, the weight function described by Irie depends on a physical “POSITION,” or distance “D” and not on a temporal position. (*Id.*) Thus, Irie lacks the requisite disclosure to render claims 29 and 33 obvious.

Irie also does not teach or suggest the recitations of claims 30 and 34. The Examiner cited to column 89, lines 9-22 as allegedly disclosing these recitations. Here, the cited section of Irie refers to the reference’s method claims 40, 41, and 42. Claim 40 of Irie recites in part “generating said weights based on [an] exponential function” relating to processing areas. Claim 41 recites in part “wherein said exponential function is modified in accordance with a non-linear distortion characteristic.” Claim 42 recites in part “a plurality of sets of weightings generated based on a plurality of exponential functions different from each other.” Nowhere does Irie recite a “discrete two stage exponential function” as recited by each of Applicants’ claims 30 and 34. Thus, Irie fails to teach or suggest the recitations of claims 30 and 34.

Moreover, Irie is directed toward the calculation of physical coordinate positions based on weighted distances rather than temporal positions. (Irie, col. 89, lines 1-2.) Therefore, Irie is inapplicable to search, let alone to search within the context of “in response to a signal of interest at a particular time during the temporal document” and “identifying” and to “identify a temporal range of the temporal document for which related documents are to be found” as recited by independent claims 1 and 14, from which claims 30 and 34 respectively depend. In contrast, by disclosing an apparatus for use in the semiconductor arts, Irie can be seen to be non-analogous art. Irie discloses an “invention [that] relates to a method and apparatus for aligning each of a plurality of processing

areas (shot areas, chip patterns) aligned on a substrate to a predetermined reference position and, more particularly, to an alignment method and apparatus suitable for an exposure apparatus used in a lithography process in the manufacture of semiconductor elements and liquid crystal display elements.” (Irie, col. 1, lines 16-22.) Such a disclosure has no relevance to the foregoing claim recitations.

Accordingly, the Section 103 rejections of claims 29, 30, 33 and 34 should be withdrawn for at least these additional reasons.

Application No. 10/810,964  
Amendment in Response to Non-Final  
Office Action dated February 25, 2009  
Reply to Office Action of November 26, 2008

Docket No.: 99-851CON1

### **CONCLUSION**

In view of the above amendment, Applicants believe the pending application is in condition for allowance.

Applicants believe no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 18-0013, under Order No. 65632-0536 from which the undersigned is authorized to draw. To the extent necessary, a petition for extension of time under 37 C.F.R. § 1.136 is hereby made, the fee for which should be charged to this deposit account.

Dated: February 25, 2009

Respectfully submitted,

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